

**UNITED STATES DISTRICT COURT
DISTRICT OF NEW HAMPSHIRE**

EXOTHERMICS, INC.,

Plaintiff

v.

ERNST & YOUNG U.S. LLP and
ERNST & YOUNG LLP,

Defendants.

Civil Action No. _____

JURY TRIAL DEMANDED

COMPLAINT

Plaintiff Exothermics, Inc. (“Exothermics” or “Plaintiff”), by its undersigned attorneys, states the following as its Complaint against defendants Ernst & Young U.S. LLP and Ernst & Young LLP (collectively or individually, “EY” or “Defendants”).

NATURE OF THE ACTION

1. Exothermics brings this civil action against EY for correction of inventorship arising under the patent laws of the United States, Title 35 of the United States Code, involving U.S. Patent Application No. 18/155,308 (“the ’308 application”) (attached as Exhibit A), U.S. Provisional Application No. 63/300,425 (“the ’425 provisional”) (attached as Exhibit B), PCT Application No. PCT/US23/60739 (“the ’739 PCT”) (attached as Exhibit C), and any other U.S. or international patents or patent applications that claim priority, directly or indirectly, to the ’308 application, the ’425 provisional, and/or the ’739 PCT (collectively, “the Disputed Patents and Patent Applications”). In addition, Exothermics brings this civil action against EY for equitable relief, monetary damages, attorneys’ fees, and costs resulting from EY’s unjust

enrichment, violation of New Hampshire's Consumer Protection Act, and negligent misrepresentations.

2. The origins of this lawsuit began after EY contacted Exothermics in October 2020. EY explained that it was seeking help to potentially solve a long-felt but unmet need in the distilling industry, among others, that ages liquids in wooden barrels. EY explained that the market to extract liquids that soak into wooden barrels during the aging process—such as bourbon or scotch whisky—is large and in search of solutions to improve yield. EY sought Exothermic's expertise to try to solve the problem. While EY recognized that this problem existed from its clients, and hoped to capitalize on a solution to that market need, EY had been unable to find a company willing to take on the challenge of inventing an economically effective means of extracting whisky from the staves of a wood barrel using vacuum technology. Upon a recommendation from an Exothermics competitor, EY eventually turned to Exothermics.

3. Exothermics is a New Hampshire company whose scientists are experts in vacuum technologies, using these technologies to solve challenges for the aerospace industry and defense contractors. Because of Exothermics' expertise, EY induced Exothermics to undertake this development challenge by promising a potentially very lucrative partnership opportunity if Exothermics were able to come up with a feasible solution to the problem. EY explained that Exothermics would reap sizeable financial benefits from this venture, with Exothermics providing the machinery and expertise for the vacuum extraction systems and EY marketing the solution to EY's clients and its other connections.

4. Exothermics took on the challenge. After considerable trial and error combined with significant expense on Exothermics' part (EY did not pay Exothermics for this work), Exothermics was ultimately successful. In sum, Exothermics invested substantial time and

resources in inventing, building, testing, and developing a viable prototype vacuum extraction system at its New Hampshire facilities with the goal of servicing this market. And it worked. EY had two of its distillery clients ship empty barrels to Exothermics' New Hampshire facilities, and Exothermics successfully performed trials using these barrels. Exothermics scientists invented what no one else had ever accomplished—a viable vacuum extraction system to recover liquids that soaked into the wood of barrels used for the aging process.

5. But EY never made good on its promises to develop a business venture together with Exothermics. Indeed, EY never gave Exothermics a dime. Instead, EY stole Exothermics' invention by covertly filing patent applications with the U.S. Patent and Trademark Office—without Exothermics' involvement or consent. And to add insult to this injury, even though Exothermics invented the vacuum extraction system, EY wrongfully named only an EY employee as the sole inventor, intentionally excluding the true Exothermics inventors and misappropriating Exothermics' intellectual property rights. Upon information and belief, EY's team of business consultants wanted to capture the full value of Exothermics' inventions and keep it for themselves.

6. EY hid the content of the patent applications from Exothermics for over a year, requiring a May 2023 non-disclosure agreement to be signed before disclosing copies of the patent applications to Exothermics (the applications have since been published by the U.S. Patent and Trademark Office ("USPTO") and are publicly available on the USPTO website). Before Exothermics realized the extent of EY's deception, the EY employee who EY (and its attorneys) named as sole inventor attempted to demonstrate the prototype of Exothermics's invention to an EY client on or around August 2022, but upon information and belief he was not savvy enough to even operate it despite Exothermics' detailed instructions on how to do so. As Exothermics

began to discover EY's rascality (no easy task as EY was hiding the content of the applications from Exothermics), EY stopped business contacts with Exothermics and since that time the communications between the parties have been through counsel.

7. Exothermics spent months trying to resolve the dispute, exchanging correspondence pursuant to Federal Rule of Evidence 408 and attempting to set up an in-person meeting to resolve the dispute, but these efforts were ultimately futile. Accordingly, Exothermics now seeks relief from the Court. Although additional EY misdeeds may well come out during discovery, based on what is currently known Exothermics seeks the equitable relief of correction of inventorship pursuant to 35 U.S.C. §§ 116 and/or 256, and/or 37 C.F.R. §1.48, and assignment of the misappropriated intellectual property rights to Exothermics, and also damages, attorneys' fees, and costs under New Hampshire's Consumer Protection Act, RSA Chapter 358-A, unjust enrichment, and/or negligent misrepresentation, and any other relief that the law will allow.

THE PARTIES

8. Exothermics is a corporation organized and existing under the laws of the State of Delaware, having a principal place of business at 14 Columbia Drive, Amherst, New Hampshire, 03031.

9. Upon information and belief, defendant Ernst & Young U.S. LLP is a corporation organized and existing under the laws of the State of Delaware, having a principal place of business at 1 Manhattan West, 395 Ninth Avenue, New York, New York, 10001.

10. Upon information and belief, defendant Ernst & Young LLP is a corporation organized and existing under the laws of the State of Delaware, having a principal place of business at 1 Manhattan West, 395 Ninth Avenue, New York, New York, 10001.

11. Upon information and belief, defendant Ernst & Young U.S. LLP is directly or indirectly a wholly owned affiliate or subsidiary of defendant Ernst & Young LLP. Upon information and belief, Ernst & Young U.S. LLP is affiliated with and under the control of Ernst & Young LLP, and both entities hold themselves out under the trade name EY.

JURISDICTION AND VENUE

12. This Court has jurisdiction over the subject matter of this action pursuant to 28 U.S.C. §§ 1331, 1332, and/or 1338(a), in that the matter in controversy (i) arises under the patent laws of the United States, Title 35 of the United States Code, and (ii) is between citizens of different states and exceeds the sum or value of \$75,000, exclusive of interest and costs.

13. This Court has personal jurisdiction over Defendants under: (i) Fed. R. Civ. P. 4(k)(1); (ii) Fed. R. Civ. P. 4(k)(2); and (iii) N.H. Rev. Stat. Ann. § 510:4.

14. This Court has personal jurisdiction over Defendants at least because, upon information and belief: (i) EY is doing business in New Hampshire and maintains continuous and systematic contacts with this Judicial District; (ii) EY transacted business with Exothermics in New Hampshire (iii) EY committed the tortious acts alleged in this complaint in New Hampshire; and (iv) EY injured Exothermics under New Hampshire's Consumer Protection Act in New Hampshire.

15. Venue is proper in this Court under 28 U.S.C. §§ 1391(b) and/or 1391(c).

FACTS COMMON TO ALL COUNTS

16. Founded nearly 30 years ago in New Hampshire, Exothermics has been leading the way in innovative technologies for the conceptualization, development, testing, validation, and production of a large variety of high performance non-oxide ceramics, refractory metals, and thin film coatings. Exothermics' headquarters and primary manufacturing facilities are located in New Hampshire.

17. Exothermics is an expert in the research, design, engineering, testing, and production of equipment utilizing vacuum technology. Exothermics is a leader in technologies concerning physical vapor deposition, high-temperature furnacing, hot isostatic pressing, material characterization, precision milling and machining, and specialized welding and sheet metal fabrication.

18. Included in Exothermics' product and service offerings are the provision of innovative design, analyses, and engineering services utilizing Exothermics' specialized know-how and engineering skills concerning vacuum furnaces, vacuum chambers, and associated technology.

19. Exothermics has specialized process and engineering skills, including in the design and analysis of sputtering furnaces, vacuum furnaces, and vacuum chambers, and it offers engineering solutions and support for numerous hot pressing, carbon fiber manufacturing, HIP processing, vacuum brazing, heat transfer, FEA, Joule heating, and Ply layup manufacturing disciplines.

20. Exothermics works primarily in the aerospace and defense industries as a provider of advanced materials and components for extreme applications such as hypervelocity projectiles and supersonic missiles.

21. Exothermics makes use of vacuum equipment and related vacuum processing expertise for the purpose of creating high performance components for a number of research and development ("R&D") and production-related applications for demanding missile, rocket, and hypersonic propulsion applications.

22. Exothermics scientists are, quite literally, rocket scientists.

23. On or around October 22, 2020, EY employee Mr. Zachary James Hagan (“Mr. Hagan”) contacted Exothermics to ask about whether Exothermics would be able to use its expertise, including in the area of vacuum technology and manipulation of materials, to solve a long-felt but unmet need in the distilling and other industries of being able to more effectively extract liquids from wooden barrels, in particular, liquids that are absorbed into the wood of wooden barrels during an aging process.

24. EY’s clients included, for example, distillers that age liquid products such as whisky, cognac, wine, vinegars, soy sauce, and other high value liquid products in wooden barrels to impart improved attributes to those products, such as flavor, smoothness, color, and other attributes. By aging their products in wooden barrels, EY’s clients have long been able to increase the value of those products.

25. A downside of the aging process, however, is the loss of a significant portion of the high-value liquid products due to the natural absorption of the liquids into the wood that is used in the barrels. For example in the whisky making process, the whisky is aged in wooden barrels in which the wood on the interior whisky-facing side of the barrel has been charred, and during the aging process a significant amount of alcohol is absorbed into the wood of the barrel. The aging process may last years for high-value liquids.

26. When a barrel is drained as part of the production process, for example for bottling, blending with other liquids, or to transfer the liquid into a different barrel for further aging, a substantial portion of the liquid that was absorbed into the wood of the barrel remains there. For example, the Scotch whisky industry colloquially refers to the liquid that is lost during the aging process as the “angel’s share,” which accounts for the liquid that is absorbed into the barrel and, to some extent, the liquid that evaporates through the barrel.

27. The financial value of the absorbed liquid that remains within the wood of the barrel after draining is lost to the distillers. Upon information and belief, the lost value can exceed a few million dollars per year of otherwise saleable product for a distillery.

28. The market potential for more effectively recovering whiskey (or whisky, depending on the country of origin, e.g., Scotch whisky vs. bourbon whiskey)¹ and other liquids that have been absorbed into wooden barrels is significant. For example, upon information and belief, distillers in the state of Kentucky alone make over 2 million barrels of bourbon per year. Upon information and belief, with such distillery volumes, a process that enables more effective extraction of bourbon from bourbon casks in the state of Kentucky alone has the potential for making at least \$10,000,000 per year in additional annual revenue for distillers. Worldwide, the potential annual revenue gain that is available to distillers and other industries that age liquids in wooden barrels is enormous—in addition to many states in the United States that distill and age spirits, e.g., bourbons and other whiskeys, distilling and/or aging liquid products is a major source of revenue for companies throughout the world, such as Scotland (e.g., Scotch whisky), Ireland (e.g., Irish whiskey), France (e.g., cognac, wine, and other spirits), Japan (e.g., Japanese whisky, sake, and soy sauce), Canada (e.g., Canadian whisky), and Italy (e.g., aged grappa, wine, and balsamic vinegars).

29. Although distillers have attempted to recover the liquids from the wood through various means, upon information and belief, to date no such recovery was possible without significantly altering the flavor of the recovered liquid, significantly diluting the product with water and decreasing the concentration of alcohol, and/or taking excessive processing time per

¹ See, e.g., Britannica, What's the Difference Between Whiskey and Whisky? What About Scotch, Bourbon, and Rye?, <https://www.britannica.com/story/whats-the-difference-between-whiskey-and-whisky-what-about-scotch-bourbon-and-rye> (last visited September 16, 2024).

barrel. For example, upon information and belief, the distilling industry has used a soaking technique to recover product from the wood of bourbon whiskey barrels that involves adding water into the barrels and letting the product leach out into the water. However, this takes a significant amount of time and the recovered product from the soaking technique is substantially diluted and has low alcohol yields, resulting in the need for distillers to blend the diluted recovered liquids with undiluted liquids taken from other barrels, resulting in a substantially different product. While distillers may creatively market such blended products for their different flavor characteristics, a more economically valuable proposition is to recover the liquids that were absorbed into the wooden barrels without taking as much time, without leading to a substantially altered flavor, and/or without significant dilution.

30. From its work with its distillery clients, EY recognized the existence of the long-felt but unmet need to recover a portion of the liquids that had absorbed into wooden barrels during the aging process. Upon information and belief, EY determined that it could expand its business for these clients if EY were able to offer services, such as machines and processes that allowed for further processing of the barrels used for aging liquid products to recover at least a portion of these valuable products in a usable form and increase their clients' product yields. The potential market opportunity is enormous because millions of barrels are emptied every year around the world in relevant industries, such as distilling.

31. EY's employee Mr. Hagan, who upon information and belief had no significant technical or scientific background in the design, manufacture, or operation of vacuum machinery or systems, sought to explore whether anyone could conceive of and build a vacuum system and process that could be used to remove the liquid out of the wood. Upon information and belief, Mr. Hagan did not have the knowledge and expertise to determine whether the idea was

technologically viable—let alone how to develop a machine and process capable of doing so—prior to learning such information from Exothermics. Upon information and belief, Mr. Hagan did not have expertise in how to conceive of, design, operate, or otherwise reduce to practice a vacuum system at all, let alone a vacuum system that would work for the intended purpose of recovering liquids from a wooden barrel. Thus, Mr. Hagan set out to locate a potential EY partner to explore the concept of recovering liquid from wood barrels.

32. Upon information and belief, after contacting other companies that develop and/or manufacture vacuum machinery, Mr. Hagan began to realize that inventing a vacuum machine that might have the potential of being capable of handling a wood barrel was no easy task, regardless of whether such a device could be made to work. Upon information and belief, companies that Mr. Hagan initially contacted declined his invitation to try to invent a prototype system.

33. Upon information and belief, one vacuum machine developer that Mr. Hagan contacted finally suggested that he try getting in contact with that developer's competitor—namely, Exothermics—because of Exothermics' well-known reputation for and expertise in developing novel vacuum machinery and processes, in particular for the aviation and defense industries.

34. On or around October 8, 2020, Mr. Hagan contacted Exothermics to find out whether they possessed suitable expertise and would be interested in exploring the feasibility of using a vacuum to pull remnant liquids from large wooden barrels, starting with pulling bourbon from barrels of one of EY's clients. Mr. Hagan explained that any successful extraction would need to minimize the possibility of pulling any tannins or other undesirable materials out of the

wood. The process would also need to have a satisfactory yield, including by avoiding losing valuable volatiles (e.g., ethanol) to evaporation in the vacuum process.

35. On or around October 22, 2020, the discussions between Exothermics and EY continued. To entice Exothermics to undertake this venture, Mr. Hagan explained the enormity of the unmet need and the size of the market opportunity if Exothermics succeeded in conceiving and developing an operable vacuum extraction system.

36. On or around October 27, 2020, Exothermics sent EY a non-disclosure agreement, which EY and Exothermics entered into to protect Exothermics' confidential information.

37. Discussions continued over the next several months, with Mr. Hagan traveling to New Hampshire in November 2020 to more fully explain the opportunity to the Exothermics team. EY ultimately convinced Exothermics that the financial benefits of building a vacuum extraction business in partnership with EY was worth Exothermics investing the time, money, and other resources towards inventing a vacuum extraction system because EY could market such a system to its existing and contacts who might become future clients. EY represented that its existing base of clients in the distilling industry was already substantial, and this market share would be likely to grow if EY were able to market a vacuum extraction system to future clients, because the industry as a whole sought a way to profitably boost their yields of high-value aged spirits and other products.

38. Thus, EY induced Exothermics to undertake this development by promising a potentially very lucrative partnership opportunity to Exothermics in which the two partners would financially exploit Exothermics' invention with EY's clients and connections.

39. In view of the potential financial opportunity that EY presented, and without EY providing Exothermics any compensation or remuneration in return for performing this research and development, Exothermics set out to invent a solution to the unmet need of a vacuum system that would be able to successfully extract liquids out of wooden barrels.

40. Ultimately, the Exothermics team of Mr. Stephen G. DiPietro, Mr. John K. Philbrick, and Mr. Matthew C. Smith (collectively, the “Exothermics Inventors”) used their 70+ years of combined experience in vacuum systems to conceive of a system that they believed would work to solve the unmet need that Mr. Hagen presented to them, and they agreed to build, test, and reduce to practice their invention based on EY’s assurances. EY had no role in nor did it provide any assistance to the Exothermics Inventors in conceiving, developing, reducing to practice, building, testing, or operating such a vacuum extraction system. The Exothermics Inventors all reside in the state of New Hampshire.

41. EY had four (4) barrels sent to Exothermics’ New Hampshire facilities for the initial trial in which Exothermics used its in-house existing vacuum equipment that had been modified based on the Exothermics Inventors’ initial conceptual design. Two EY employees were present for Exothermics’ initial trial in New Hampshire. This initial trial provided positive initial results, although more experimentation was needed to develop the system.

42. The second trial was delayed by COVID-19 restrictions but was conducted once the COVID-19 restrictions began to ease. The second trial included 20 barrels sent by overnight delivery from an EY distillery client to Exothermics’ New Hampshire facilities. EY representatives were present for the second trial in New Hampshire. The samples and process data collected (pumping duration, heating level/time, pumping strategy) were recorded by Exothermics and sent back to EY’s distillery client. They tested the samples and reported that

their post-test findings had positive results, again demonstrating the effectiveness of the Exothermics trial.

43. EY then asked Exothermics to ship a barrel from New Hampshire to Florida so EY could make a presentation using an example barrel to drum up support for the project with EY decision-makers and potential investors. This presentation resulted in sufficient interest for EY to ask Exothermics to design and build a purpose-built prototype vacuum extraction system.

44. Exothermics proceeded to prepare a prototype vacuum extraction system in New Hampshire, based the Exothermics Inventors' initial conception of the system. Exothermics developed its prototype vacuum extraction system based on Exothermics' initial concept and included further modifications based on the knowledge that Exothermics gained by the initial trials using its in-house existing vacuum equipment. Again, EY had no role in the development of this prototype system.

45. Upon Exothermics' completion of its prototype vacuum extraction system in New Hampshire, EY asked Exothermics to ship the prototype system to Chicago so that EY could demonstrate the system to an EY client without Exothermics being present. However, EY was unable to make the system function on its own at the demonstration because, upon information and belief, Mr. Hagan lacked the sufficient knowledge and understanding to operate or use the system.

46. EY shipped the system back to Exothermics in New Hampshire along with four barrels from its distillery client for testing. Unlike EY, Exothermics was able to operate and use the prototype vacuum extraction system on the four test barrels. Exothermics performed those tests in New Hampshire and sent the resulting liquid back to EY's distillery client for testing. Mr. Hagan was not present during the testing.

47. After reviewing the positive testing results from EY's client, Mr. Hagan and Exothermics continued their business discussions concerning an EY/Exothermics venture to market the vacuum extraction systems to EY's clients.

48. After proving that Exothermics' vacuum extraction system was initially successful, and based on testing using the wooden barrels that EY had its client ship to Exothermics in New Hampshire, Exothermics continued its development of the vacuum extraction system to ensure that the system would work for its intended purpose. Exothermics made several improvements to the Exothermic's Inventors' initial design by making further modifications to the vacuum extraction system and to the process for operating the system. For example, Exothermics made changes to the machinery design, including further innovations to the vacuum, heating, and extraction means for extracting the liquids from the wooden barrels. These modifications improved the yield and quality of the liquids extracted from the wooden barrels using the vacuum extraction system as demonstrated by further testing of the machinery in New Hampshire.

49. EY sent its client samples of liquids extracted from the wooden barrels that Exothermics extracted in New Hampshire using Exothermics' vacuum extraction system. EY's client tested the samples and determined that the samples were between 116 to 128 proof. These results demonstrated the effectiveness of Exothermics' design, as well as its superiority as compared to existing barrel extraction concepts.

50. During Exothermics' development of the vacuum extraction system, Mr. Hagan suggested conducting a literature search for patents that might restrict the use of the system, and Mr. Hagan also said that he would look into securing funding from within EY for the system. Mr. Hagan asked Exothermics for detailed technical information about the Exothermics vacuum

extraction system that he could share with others at EY, including measurements and process parameters when operating the system.

51. Mr. Hagan reported to Exothermics that the Exothermics vacuum extraction system project was getting attention high up in EY's management structure. Mr. Hagan reported that EY management told him to work with EY's intellectual property attorneys to discuss the design. Mr. Hagan reported that EY's patent search was funded by EY management and was underway. Mr. Hagan also reported that EY's client was interested in moving forward with a larger test using its bourbon whiskey barrels and Mr. Hagan proposed to Exothermics that 20 barrels be shipped to Exothermics' facilities in New Hampshire for testing.

52. Exothermics told Mr. Hagan that they could accommodate another round of testing in their New Hampshire facilities, and that the Exothermics team had come up with several innovations that the Exothermics Inventors expected would improve the extraction method and increase the yield.

53. Exothermics spent significant resources conceiving and reducing to practice the vacuum extraction system, including an investment of at least \$400,000 of its financial resources and at least \$250,000 of its time to invent, conceive of, develop, and reduce to practice the prototype vacuum extraction system, and to test and demonstrate the vacuum extraction system, including testing for and demonstrating the vacuum extraction system to EY and EY's clients. In addition, Exothermics' investment included other economic costs, such as lost opportunity costs because Exothermics would have been able to devote such investments to other ventures had it not been induced by EY to invest its time and resources to develop the vacuum extraction systems for wooden barrels. The vast majority of Exothermics' work and expense occurred in the state of New Hampshire. One of the results of these investments is that Exothermics

successfully developed a prototype of the vacuum extraction system and demonstrated the vacuum extraction system to EY.

54. EY never developed any prototype of a vacuum extraction system on its own because EY did not have the knowledge, experience, or ability to conceive of, develop, reduce to practice, or even operate such a vacuum extraction system. At one point, as discussed above, Mr. Hagan attempted to operate the Exothermics vacuum extraction system with the goal of demonstrating the system to an EY client—a demonstration that, inexplicably, EY would not even allow Exothermics to attend—but Mr. Hagan failed in his attempt to operate Exothermics vacuum extraction system on his own.

55. Exothermics received no compensation or remuneration from EY for the efforts of Exothermics to invent, conceive of, develop, and reduce to practice a prototype vacuum extraction system.

56. In addition, Exothermics received no compensation, remuneration, or reimbursement from EY for its efforts to demonstrate the vacuum extraction system to EY clients, including when Exothermics shipped the prototype system from New Hampshire to an EY distillery client, at EY's request, for EY's failed attempt to demonstrate the prototype to its client.

57. Exothermics was under no obligation to assign any of its intellectual property to EY. The parties had no formal written agreement governing this project. Exothermics was mistakenly led to believe by EY that EY would be an honorable business partner.

58. On or around December 1, 2021, after talking with EY's patent attorneys, Mr. Hagan told Exothermics that EY's patent attorneys wanted to ask Exothermics questions about the vacuum system design and Mr. Hagan also asked about whether Exothermics would consider

“co-inventorship” for a patent application filing. Upon information and belief, this offer by EY was a ruse designed to discourage Exothermics from filing its own patent applications and to coax additional information about the vacuum system from the Exothermics Inventors for use in the patent applications that EY improperly filed for itself.

59. Despite Mr. Hagan’s overtures about co-inventorship, and without notice to or authorization from Exothermics, on or around January 18, 2022, EY and its patent attorneys filed the first of the Disputed Patents and Patent Applications for the vacuum extraction system, the ’425 Provisional (Exhibit B). EY and its patent attorneys improperly named Mr. Hagan as the sole inventor, and EY is named as the Applicant.

60. On January 17, 2023, EY filed the ’308 Application (Exhibit A), claiming priority to the ’425 Provisional, and again EY and its patent attorneys named Mr. Hagan as the sole inventor. EY is named as the Applicant of the ’308 Application. EY also filed with the USPTO a Statement under 37 C.F.R. § 3.73(c) representing that EY is the “assignee of the entire right, title, and interest” to the ’308 Application.

61. The USPTO issued a Notice of Publication of Application, stating that the ’308 Application would be “electronically published as a patent application publication,” with “information on the status of the application” also made publicly available, on July 20, 2023 (Exhibit D).

62. Upon information and belief, the USPTO issued a Notice of Allowance for the ’308 Application on July 26, 2024.

63. On January 17, 2023, EY filed the ’739 PCT (Exhibit C), claiming priority to the ’425 Provisional, and again EY and its patent attorneys named Mr. Hagan as the sole inventor. EY is named as the Applicant. In the ’739 PCT, EY also declared that it is “[e]ntitled to claim

priority” to the ’425 Provisional based on “an assignment” from Mr. Hagan dated January 20, 2022.

64. Upon information and belief, EY has not filed international patent applications claiming priority to Disputed Patents and Patent Applications in national stage filings in all of the countries where there is a market potential for vacuum extraction systems, such as Scotland (e.g., Scotch whisky), Ireland (e.g., Irish whiskey), France (e.g., cognac, wine, and other spirits), Japan (e.g., Japanese whisky, sake, and soy sauce), Canada (e.g., Canadian whisky), and Italy (e.g., aged grappa, wine, and balsamic vinegars). Upon information and belief, the due date for filing national stage patent applications claiming priority to the Disputed Patents and Patent Applications in one or more of these international patent jurisdictions has already expired, meaning that EY’s misappropriation of Exothermics intellectual property rights has resulted in the inability for Exothermics to fully protect its intellectual property rights in all international patent jurisdictions where patent protection would be economically beneficial.

65. Upon information and belief, EY has expertise in accounting and analyzing markets. Upon information and belief, EY analyzed the market for the potential value for Exothermics’ innovation. Upon information and belief, EY internally projected significant value (e.g., in internal forecast, projections, and evaluations) for Exothermics’ invention. Upon information and belief, EY decided to try to capture as much of this value as possible for itself, even at the expense of Exothermics, by misappropriating Exothermics’ intellectual property rights, including the filing of the Disputed Patents and Patent Applications that disclose and claim subject matter invented by the Exothermics Inventors.

66. Upon information and belief, at the time of EY’s filing of the Disputed Patents and Patent Applications, Mr. Hagan was an EY employee, to this day Mr. Hagan is still an EY

employee, and Mr. Hagan is under the control of EY with respect to the facts of this Complaint. Upon information and belief, Mr. Hagan had and still has an obligation to assign any patent rights from his work at EY to EY.

67. Even though Exothermics conceived of and reduced to practice the subject matter disclosed in and the inventions claimed in the Disputed Patents and Patent Applications, EY and its patent attorneys wrongfully failed to list any of the Exothermics Inventors as inventors of the Disputed Patents and Patent Applications. Incredibly, EY did not even list the Exothermics Inventors as so much as joint- or co-inventors of the Disputed Patents and Patent Applications.

68. Upon information and belief, EY used Exothermics' drawings in EY presentations and for the Disputed Patents and Patent Applications.

69. EY filed the Disputed Patents and Patent Applications without any permission or consent from Exothermics. EY also did not have permission or consent to use the Exothermics' drawings for the Disputed Patents and Patent Applications.

70. After EY withheld information from Exothermics about EY's filing of and the content contained in the Disputed Patents and Patent Applications, EY nonetheless continued to work with Exothermics to continue the testing of the vacuum extraction system and learn about the further machinery and process improvements that Exothermics was working on to develop and enhance the performance of the Exothermics vacuum extraction system.

71. Upon information and belief, EY, Mr. Hagan, and/or EY's patent attorneys have not disclosed Exothermics Inventors' involvement with and their conception and reduction to practice of the subject matter contained in the Disputed Patents and Patent Applications to the USPTO.

72. Months after EY filed the first of the Disputed Patents and Patent Applications, Exothermics filed its own patent application that properly names the Exothermics Inventors as the inventors of the subject matter and claims directed to the vacuum extraction system invention that the Exothermics Inventors conceived of and reduced to practice. Unlike the patent application that EY improperly filed, the Exothermics patent application includes details about the vacuum extraction system design and operation.

73. Exothermics has filed national stage patent applications in multiple international jurisdictions.

74. Once Exothermics became aware of the Disputed Patents and Patent Applications, the communications between EY and Exothermics were limited to communications that involved counsel attempting to settle the dispute. These attempts to negotiate a settlement to the dispute proved to be futile.

75. From at least September 25, 2023 to July 10, 2024, Exothermics spent considerable effort attempting to settle the dispute concerning the Disputed Patents and Patent Applications, including an attempt to hold in-person meetings between the executives of EY and Exothermics. But EY repeatedly rescheduled and/or cancelled such meetings after they were scheduled.

76. Upon information and belief, EY could not proceed in a business venture with Exothermics because internal EY policy and/or U.S. rules, regulations, and/or other laws would have prohibited and/or prevented EY and Exothermics from entering into a business relationship with EY's clients and prospective clients.

77. Upon information and belief, EY knew or should have known that there would be significant, if not insurmountable, obstacles from internal EY policy and/or U.S. rules,

regulations, and/or other laws would have prohibited and/or prevented EY and Exothermics from entering into a business relationship with EY's clients and prospective clients before or during EY's work with and inducement of Exothermics' conception and reduction to practice of the vacuum extraction system.

FIRST COUNT

(Injunction Ordering EY to Assign the Disputed Patents and Patent Applications to Exothermics and Correction of Inventorship for the Disputed Patents and Patent Applications)

78. Plaintiff repeats and realleges each of the foregoing paragraphs as if fully set forth herein.

79. The Exothermics Inventors are the true and correct inventors of the Disputed Patents and Patent Applications.

80. The Exothermics Inventors conceived each of the claims of the Disputed Patents and Patent Applications, as well as all of the patentable subject matter disclosed in the Disputed Patents and Patent Applications.

81. The Exothermics Inventors reduced to practice each of the claims of the Disputed Patents and Patent Applications, as well as all of the patentable subject matter disclosed in the Disputed Patents and Patent Applications.

82. Mr. Hagan did not invent any of the claims or patentable subject matter in the Disputed Patents and Patent Applications. Mr. Hagan did not reduce to practice the claims or patentable subject matter of the Disputed Patents and Patent Applications. Mr. Hagan should not have been named as an inventor of the Disputed Patents and Patent Applications.

83. Pursuant to 35 U.S.C. §§ 116 and/or 256, and/or 37 C.F.R. § 1.48, Exothermics is entitled to a judicial declaration ordering the Director of the USPTO to issue a certificate correcting the inventorship of the Disputed Patents and Patent Applications to name the Exothermics Inventors as the sole inventors of the Disputed Patents and Patent Applications.

84. Since the Exothermics Inventors are the sole inventors of the Disputed Patents and Patent Applications and since the Exothermics has exclusive rights to the assignment of all right, title, and interest in and to any such inventions to Exothermics, all right, title, and interest in and to the Disputed Patents and Patent Applications belongs to Exothermics.

85. Pursuant to 35 U.S.C. § 261, since Mr. Hagan did not invent the patentable subject matter disclosed and claimed in the Disputed Patents and Patent Applications, Exothermics is entitled to a judicial declaration ordering and enjoining EY to assign all right, title, and interest in and to the Disputed Patents and Patent Applications to Exothermics.

86. In the alternative, however, to the extent that the Court finds that Mr. Hagan is entitled to be listed as a joint inventor on the Disputed Patents and Patent Applications, pursuant to 35 U.S.C. §§ 116 and/or 256, and/or 37 C.F.R. §1.48, Exothermics is entitled to a judicial declaration ordering the Director of the USPTO to issue a certificate correcting the inventorship of the Disputed Patents and Patent Applications to name the Exothermics Inventors as joint inventors in addition to Mr. Hagan.

87. In the alternative, to the extent that the Court finds that Mr. Hagan is entitled to be listed as a joint inventor on the Disputed Patents and Patent Applications, EY and/or Mr. Hagan do not have full and exclusive right, title, and interest in or to the Disputed Patents and Patent Applications. Pursuant to 35 U.S.C. § 261, and as further addressed in the other Counts, Exothermics is entitled to a judicial declaration ordering and enjoining EY to assign all or joint right, title, and interest in and to the Disputed Patents and Patent Applications to Exothermics.

SECOND COUNT

(Unjust Enrichment and Assignment of the Disputed Patents and Patent Applications)

88. Plaintiff repeats and realleges each of the foregoing paragraphs as if fully set forth herein.

89. There was no written or oral contract between Exothermics and EY under which Exothermics had any obligation to undertake any efforts to invent, conceive of, develop, and reduce to practice a prototype vacuum extraction system.

90. Exothermics received no compensation or remuneration from EY for the efforts undertaken by Exothermics to invent, conceive of, develop, and reduce to practice a prototype vacuum extraction system.

91. Exothermics received no compensation, remuneration, or reimbursement from EY for its efforts to demonstrate the vacuum extraction system to EY clients at EY's request, or to aid and assist EY in demonstrating the vacuum extraction system to EY's clients.

92. Exothermics invested at least \$400,000 of its financial resources and at least \$250,000 of its time to invent, conceive of, develop, and reduce to practice a prototype vacuum extraction system, and to test and demonstrate the vacuum extraction system, including demonstrating the vacuum extraction system to EY and EY's clients, plus other economic costs such as lost opportunity costs because Exothermics would have been able to devote such investments to other ventures had it not been induced by EY to invest its time and resources to develop the vacuum extraction systems for wooden barrels.

93. EY has profited or enriched itself at the expense of Exothermics because, *inter alia*, EY encouraged Exothermics to invent, conceive of, develop, and reduce to practice a prototype vacuum extraction system, and without any permission or authorization from

Exothermics and without any contractual right to do so, EY wrongfully filed for and obtained rights to the Disputed Patents and Patent Applications.

94. In addition, EY's actions have caused economic damage and harm to the value of the Disputed Patents and Patent Applications.

95. The filing of the Disputed Patents and Patent Applications by EY without the correct inventive entity, i.e., without the Exothermics Inventors listed as the inventors, caused economic damages and harm to Exothermics because the Disputed Patents and Patent Applications may now be alleged to be prior art and/or double patenting references against Exothermics' own patents and patent applications, which harms Exothermics' ability to protect the full scope of its inventions and valuable intellectual property rights in the United States and internationally.

96. The filing of the Disputed Patents and Patent Applications by EY without filing national stage applications in all appropriate countries and jurisdictions to fully protect the patent rights of the Disputed Patents and Patent Applications has caused economic damages and harm to Exothermics because patent rights are territorial, and many distillers and distilleries are located outside of the United States, e.g., in Scotland, Ireland, France, Italy, and Japan. Upon information and belief, EY has not filed national stage patent applications claiming priority to the Disputed Patents and Patent Applications in one or more of these international patent jurisdictions, and the time to file additional national stage applications has already expired, meaning that EY's misappropriation of Exothermics intellectual property rights has resulted in the inability of Exothermics to fully protect its intellectual property rights in all international patent jurisdictions where patent protection would be economically beneficial. EY's actions

have thus deprived Exothermics of the ability to protect the full scope of its inventions and valuable intellectual property rights outside of the United States.

97. The Exothermics Inventors are the true and correct inventors of the Disputed Patents and Patent Applications.

98. The Exothermics Inventors conceived each of the claims of the Disputed Patents and Patent Applications, as well as all of the patentable subject matter disclosed in the Disputed Patents and Patent Applications.

99. The Exothermics Inventors reduced to practice each of the claims of the Disputed Patents and Patent Applications, as well as all of the patentable subject matter disclosed in the Disputed Patents and Patent Applications.

100. Mr. Hagan did not invent any of the claims or patentable subject matter in the Disputed Patents and Patent Applications, Mr. Hagan did not reduce to practice the claims or patentable subject matter of the Disputed Patents and Patent Applications, and Mr. Hagan should not have been named as an inventor of the Disputed Patents and Patent Applications.

101. Because Mr. Hagan did not conceive of or reduce to practice the claims or subject matter of the Disputed Patents and Patent Applications, EY does not have valid right, title, and interest in or to the Disputed Patents and Patent Applications.

102. All right, title, and interest in and to the Disputed Patents and Patent Applications belongs to Exothermics.

103. EY has been unjustly enriched by its wrongful acts, and it would be unconscionable and inequitable for EY to retain the benefits of Exothermics investments in the vacuum extraction system.

104. Exothermics has been economically harmed by EY's wrongful acts, and Exothermics is entitled to damages caused by EY's unjust enrichment.

THIRD COUNT

(Violation of New Hampshire's Consumer Protection Act, RSA Chapter 358-A)

105. Plaintiff repeats and realleges each of the foregoing paragraphs as if fully set forth herein.

106. EY has profited or enriched itself at the expense of Exothermics because, *inter alia*, EY encouraged Exothermics to invent, conceive of, develop, and reduce to practice a prototype vacuum extraction system, and without any permission, authorization, or contractual right to do so, EY misappropriated and converted Exothermics' intellectual property rights to the vacuum extraction systems.

107. EY has profited or enriched itself at the expense of Exothermics because, *inter alia*, EY encouraged Exothermics to invent, conceive of, develop, and reduce to practice a prototype vacuum extraction system, and without any permission, authorization, or contractual right to do so, EY wrongly filed for and was assigned rights to the Disputed Patents and Patent Applications.

108. Exothermics received no compensation or remuneration from EY for the efforts undertaken by Exothermics to invent, conceive of, develop, and reduce to practice a prototype vacuum extraction system.

109. Exothermics received no compensation, remuneration, or reimbursement from EY for its efforts to demonstrate the vacuum extraction system to EY clients at EY's request, or to aid and assist EY in demonstrating the vacuum extraction system to EY's clients.

110. Exothermics invested at least \$400,000 of its financial resources and at least \$250,000 of its time to invent, conceive of, develop, and reduce to practice a prototype vacuum

extraction system, and to test and demonstrate the vacuum extraction system, including testing for and demonstrating the vacuum extraction system to EY and EY's clients, plus other economic costs such as lost opportunity costs because Exothermics would have been able to devote such investments to other ventures had it not been induced by EY to invest its time and resources to develop the vacuum extraction systems for wooden barrels.

111. EY's actions have caused economic damage and harm to the value of the Disputed Patents and Patent Applications.

112. The filing of the Disputed Patents and Patent Applications by EY without the correct inventive entity, i.e., without the Exothermics Inventors listed as the inventors, caused economic damages and harm to Exothermics because the Disputed Patents and Patent Applications may now be alleged to be prior art and/or double patenting references against Exothermics' own patents and patent applications, which harms Exothermics' ability to protect the full scope of its inventions and valuable intellectual property rights in the United States and internationally.

113. The filing of the Disputed Patents and Patent Applications by EY without filing national stage applications in all appropriate countries and jurisdictions to fully protect the patent rights of the Disputed Patents and Patent Applications has caused economic damages and harm to Exothermics because patent rights are territorial, and many distillers and distilleries are located outside of the United States, e.g., in Scotland, Ireland, France, Italy, and Japan, and, upon information and belief, EY failed to file national stage patent applications in international jurisdictions where liquids are aged in wooden barrels, thus depriving Exothermics of the ability to protect the full scope of its inventions and valuable intellectual property rights outside of the United States.

114. EY failed to keep Exothermics apprised about EY's intentions with respect to the vacuum extraction system.

115. EY unlawfully used unfair or deceptive acts or practices in the conduct of commerce within the State of New Hampshire because Exothermics acted in reliance on EY's promises of future benefits from building a joint venture with EY, and Exothermics invested its own time and resources to invent, conceive of, develop, and reduce to practice a prototype vacuum extraction system, and to test and demonstrate the vacuum extraction system, including testing for and demonstrating the vacuum extraction system to EY and EY's clients, but EY failed to inform Exothermics about: (i) the true nature of EY's intentions with respect to building a business; (ii) internal EY policy and/or U.S. rules, regulations, and/or other laws would have prohibited and/or prevented EY and Exothermics from entering into a business relationship with EY's clients and prospective clients; and (iii) EY's intent to misappropriate Exothermics' intellectual property rights concerning the vacuum extraction system, including the filing of the Disputed Patents and Patent Applications.

116. EY intentionally misled Exothermics into believing that Exothermics would materially benefit financially as a joint venture partner with EY for manufacturing, commercializing, and servicing vacuum extraction systems to EY's clients and prospective clients, which induced Exothermics to make substantial investments of time and resources to invent, conceive of, develop, and reduce to practice a prototype vacuum extraction system, and to test and demonstrate the vacuum extraction system, including testing for and demonstrating the vacuum extraction system to EY and EY's clients, without any compensation or reimbursement from Exothermics for such investments and efforts.

117. EY made material omissions in its disclosures to Exothermics and intentionally did not disclose or appraise Exothermics of any internal EY policies and/or U.S. rules, regulations, and/or other laws would have prohibited and/or prevented EY and Exothermics from entering into a business relationship with EY's clients and prospective clients.

118. EY intentionally misappropriated Exothermics' intellectual property rights to the vacuum extraction systems, including the Disputed Patents and Patent Applications, without disclosing or providing notice to Exothermics that EY intended to exclude Exothermics from enjoying full and unabridged rights to the intellectual property that resulted from Exothermics' investments of time and resources to invent, conceive of, develop, and reduce to practice a prototype vacuum extraction system, and to test and demonstrate the vacuum extraction system.

119. EY did not disclose that there were any restrictions on EY's ability to work with Exothermics as joint venturers to market and sell vacuum extraction systems, and associated services, to EY's clients and potential clients until after Exothermics made these substantial investments.

120. EY's actions against Exothermics, including its conversion of intellectual property, intentional misrepresentations, material omissions, bad faith dealings, and lack of candor, attained a level of rascality that would raise an eyebrow of someone inured to the rough and tumble of the world of commerce.

121. EY's misrepresentations and material omissions of information to Exothermics during the course of their business dealings were knowing uses of deceptive acts in the conduct of commerce within New Hampshire in violation of the New Hampshire's Consumer Protection Act, RSA 358-A:2.

122. Exothermics is entitled to an award of actual damages, the costs of suit, and reasonable attorneys' fees, as determined by the Court, because of EY's violation of RSA Chapter 358-A:10.

123. As a result of EY's method of competition or the act or practice being a willful or knowing violation of RSA Chapter 358-A:10, Exothermics is entitled to an award of three (3) times, but not less than two (2) times, the amount of damages otherwise determined by the Court.

FOURTH COUNT
(Defendant's Negligent Misrepresentation)

124. Plaintiffs repeat and reallege each of the foregoing paragraphs as if fully set forth herein.

125. EY represented to Exothermics that if Exothermics were able to invent, conceive of, develop, and reduce to practice the vacuum extraction system, then Exothermics and EY would be able to partner in a venture in which EY would be able to market vacuum extraction systems to EY's clients, and in so doing EY and Exothermics would be able to build a significant business directed to servicing EY's distillery and other clients that age liquids in wooden barrels, including current EY clients and potential EY clients.

126. EY induced Exothermics to expend significant money, resources, and time to invent, conceive of, develop, and reduce to practice the vacuum extraction system on the basis that EY would act as a business partner of Exothermics to make the Exothermics vacuum extraction system commercially successful through EY's marketing of the vacuum extraction system to EY's current and future clients.

127. Upon information and belief, at the time that EY made these representations to Exothermics, EY knew, should have known, or was consciously indifferent to the fact that that internal EY policy and/or U.S. rules, regulations, and/or other laws would have prohibited and/or

prevented EY and Exothermics from entering into a business relationship with EY's clients and prospective clients, such as the business relationships that EY promoted to Exothermics.

128. At no time during the lengthy and costly development process did EY inform Exothermics that EY could not effectively or legally enter into business relationships with its clients, including relationships of the type that EY promoted to Exothermics.

129. As a result, EY's representations induced Exothermics to expend significant money, resources, and time to invent, conceive of, develop, and reduce to practice the vacuum extraction system by working together with EY, with the expectation that Exothermics would economically benefit by working with EY to enter into joint ventures, limited partnerships, investments in supplier companies, leasing or licensing interests to, and/or sales of vacuum extraction systems to EY's current and prospective clients.

130. Upon information and belief, EY negligently made false statements to Exothermics, which EY knew or should have known to be false, which EY had no knowledge or belief were true, and/or which EY made to Exothermics with conscious indifference to their truth, for the purpose of causing Exothermics to reasonably rely on EY's statements when Exothermics decided to make the above-described investments in the vacuum extraction system.

131. Upon information and belief, EY negligently filed the Disputed Patents and Patent Applications even though EY knew, should have known, or was consciously indifferent to determining that (i) EY had no legal right to file the Disputed Patents and Patent Applications with the USPTO and/or international patent offices without naming the Exothermics Inventors as inventors and (ii) EY had no valid claim of ownership of the intellectual property rights that Exothermics developed after reasonably relying on EY's representations. EY should have

assigned all right, title, and interest in and to the Disputed Patents and Patent Applications to Exothermics.

132. EY's negligent misrepresentations to Exothermics have economically damaged and economically harmed Exothermics by, inter alia, (i) inducing Exothermics to make substantial investments in the vacuum extraction systems; (ii) preventing and/or impeding Exothermics from acting on its own to commercialize the vacuum extraction systems with third parties, which has led to unnecessary delays and lost opportunity costs in commercializing the vacuum extraction systems with third parties; (iii) harming Exothermics' ability to fully secure United States and/or worldwide intellectual property rights in and to the subject matter disclosed and claimed in the Disputed Patents and Patent Applications; (iv) harming Exothermics' ability to fully practice and economically benefit from the Exothermics Inventors' inventions, including using the Exothermics intellectual property rights because the Disputed Patents and Patent Applications may constitute prior art and double patenting references; and (v) leading to unnecessary delays and lost opportunity costs to Exothermics because Exothermics' investments in the vacuum extraction systems would have been invested in other ventures but for EY's negligent misrepresentations.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff respectfully requests the following relief:

A. A judgment under 35 U.S.C. §§ 116 and/or 256, and/or 37 C.F.R. §1.48, declaring that the correct inventors of the Patents-in-Suit are the Exothermics Inventors or, in the alternative, that the Exothermics Inventors are joint inventors with Mr. Hagan;

B. A judgement declaring that Exothermics owns all right, title, and interest in and to the Disputed Patents and Patent Applications, and enjoining and ordering EY to assign all right,

title, and interest in and to the Disputed Patent Applications, and the subject matter contained therein, to Exothermics.

C. A judgment against EY pursuant to N.H. RSA Chapter 358-A:10 ordering EY to pay to Exothermics an award of as much as three (3) times, but not less than two (2) times, the damages incurred by Exothermics to develop and test the vacuum extraction system, and an award to Exothermics the costs of the suit and reasonable attorney's fees, as determined by the court;

D. A judgment against EY ordering EY to pay damages to Exothermics, including reimbursement of its investments and economic damages for the torts described herein.

E. A judgment, pursuant to 35 U.S.C. § 285, declaring that this is an exceptional case and awarding Plaintiffs its attorneys' fees and costs;

F. A judgment against EY and in favor of Exothermics ordering that interest, costs, and expenses be awarded to Exothermics; and

G. Such other and further relief as this Court may deem just and proper.

DEMAND FOR JURY TRIAL

Pursuant to Federal Rule of Civil Procedure 38(b), Exothermics demands a trial by jury on all claims and issues so triable.

Dated: September 16, 2024

By: /s/ Matthew R. Johnson

Matthew R. Johnson (Bar No. 13076)

Jeffrey Adams (Bar No. 269334)

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